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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/069,546	06/07/2002	Rudy Federici	43252-200858	1488

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EXAMINER

KEENAN, JAMES W

ART UNIT	PAPER NUMBER
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3652

DATE MAILED: 01/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/069,546

Applicant(s)

FEDERICI ET AL.

Examiner

James Keenan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 October 2004.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) 6,12-15 and 17 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5,7-11,16 and 18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 2/27/02 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

1. Claims 6, 12-15, and 17 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species and/or invention, there being no allowable generic or linking claim.

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 1-5, 7-11, 16, and 18 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Independent claims 1, 9, and 10 set forth (with minor variations) that the "grippers can be moved together but actuated independently of one another". However, the specification and drawings fail to adequately explain how this can be accomplished. Although page 12 of the specification broadly recites that the individual grippers may be actuated via clutches, electric motors, or individual cylinders, applicant has failed to provide a detailed explanation of how this would actually work.

Re applicant's comments, it is submitted that if "any mechanical engineer ... would know ... how to move grippers together but actuate them independently", it is unclear what then would be the allegedly patentable subject matter, since this feature is apparently the basis of patentability. The prior art, Champet et al in particular, shows grippers with this feature. Absent any structural details of the feature and how it

operates, it appears applicant has disclosed nothing more than what is shown in the prior art.

Furthermore, with respect to claims 4 and 5, it is recited that the grippers can be pivoted into a position in which they (presumably) grip and transport wafers. However, it is not clear how the grippers in the figure 3-5 embodiment (to which claims 4 and 5 are directed) actually grip wafers. Page 13 recites that the arm 46 can be rotated counterclockwise (line 5) such that the elements 49, 50 come into contact with the wafer below diameter 54 (lines 8-9) to grip and lift the wafer (line 12). However, it is not seen how moving the arm counterclockwise would bring the elements into contact with the wafer to enable it to be gripped and lifted.

Re applicant's comments, if the gripper in figure 5 grips a wafer at the lower end position and moves counterclockwise, it would smash the wafer into the holder 42.

Further still, it is not understood how gripper element 51 is passively actuated to fix the wafer in the gripper. Applicant's suggestion that a wire could be used to accomplish this is clearly without basis in the disclosure as originally filed.

Finally, it is not understood why the gripper elements 49-51 in figure 5 appear to be different than those shown in figures 3-4, even though this is disclosed as the same embodiment. Applicant has not addressed this concern.

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claim 11 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The claim is directed to "The storage device of claim 1 ..."; however, claim 1 is directed to "A handling device ...". The claim is otherwise identical to claim 2. It will be assumed this claim was meant to depend from claim 10.

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claim 9 is rejected under 35 U.S.C. 102(b) as being anticipated by Alessandri et al (US 5,054,834).

Alessandri et al show a wafer handling device comprised of a gripping device 4 having a plurality of parallel arranged individually operated grippers 9 which can be moved together such that at least one wafer can be handled.

Applicant states that "the grippers of Alessandri et al must move together as a unit and are not actuatable independently of one another relative to the wafers". This is simply not true. The grippers have individual pistons 21 which enable to at least some extent movement of certain grippers relative to others (and therefore the wafers as well), as described in col. 5, line 63 to col. 6, line 30 (especially lines 26-30). Note that claim 9 requires only "at least one wafer to be handled ...".

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8. Claims 1-3 and 7-9 are rejected under 35 U.S.C. 102(b) as being anticipated by Champet et al (US 4,958,982).

Champet et al show a wafer handling device comprised of a gripping device having a plurality of individually operated grippers 1 such that any number of wafers can be selectively removed from or inserted into and/or between storage devices P, N. The grippers are arranged on a common carrier 6 which can be moved parallel to the storage devices along a guide element (not specifically labeled but note col. 4. lines 6-12), as seen in figures 3-6. clearly, a first gripper is "capable of", as broadly claimed, gripping a first wafer while the gripping device is in a first position, and a second gripper is "capable of" gripping a second wafer while the gripping device is in a second position and the first gripper holds the first wafer, especially since the first and second positions are not necessarily different.

Re claim 8, see col. 2, lines 52-62.

Applicant argues that the features of claim 1 cannot be performed by Champet et al because the grippers thereof must all be raised or lowered together and thus the first gripped wafer would collide with other wafers when the gripping device moves from the first position to the second position. This is unpersuasive. First of all, claim 1 is not a method. It says nothing about raising or lowering wafers. It says nothing about moving from a first position to a second position. It does not require only a first wafer to be gripped in the first position, and even if it did, there would not necessarily be other wafers in the way. Furthermore, Champet et al has the capability of independently gripping any or all of 1-13 wafers, as disclosed in col. 2, lines 63-68.

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9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 4, 5, 10, 11, 16, and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Champet et al.

Champet et al do not show the grippers to be pivoted between their empty and transport positions, although the linkage arms seen in figure 2 pivot to cause the movement of the grippers.

However, it would have been obvious for one of ordinary skill in the art at the time of the invention to have modified the apparatus of Champet et al by pivoting the grippers between the two positions thereof, such as by directly connecting the linkage arms to the grippers instead of the reciprocating guiding components 2, as this would simply be an alternate equivalent means of performing the same function in the same environment, and also would simplify the apparatus and reduce contamination by reducing the number of moving components.

Re claim 10, although Champet et al do not specifically state that the storage device includes a housing having an interior space with a plurality of locations for wafer containers and at least a portion of which is a clean room, the background of the invention as set forth in columns 1 and 2 refers to placing the wafers into a diffusion furnace and keeping the wafers free of contaminants, as well as mentioning various

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stations to which the wafers are transferred. It is well known in the art that this type of environment is generally provided in a clean room, and that such rooms often have plural storage locations for wafer containers. It would have been obvious, therefore, for one of ordinary skill in the art at the time of the invention to have modified Champet et al such that the gripping device operated in a storage device within a clean room environment and having plural locations for storing wafer containers, as this would simply be the inclusion of well known and art recognized design expediciencies for processing wafers in a furnace. Similar logic applies to claims 16 and 18 as well.

11. Applicant's arguments filed 10/13/04 have been fully considered but they are not persuasive.

All arguments have been addressed above.

12. Applicant's amendment necessitated any new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to James Keenan whose telephone number is 703-308-2559. The examiner can normally be reached on Monday through Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eileen Lillis can be reached on 703-308-3248. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


James Keenan
Primary Examiner
Art Unit 3652

jwk
12/29/04